

In the claims:

Please amend the claims as follows:

1. (Currently Amended) An isolated nucleic acid molecule comprising a nucleotide sequence ~~having at least a 90% sequence identity to a nucleic acid fragment~~ capable of encoding amino acids 1 to 9 of SEQ ID NO:2.
2. (Currently Amended) An isolated nucleic acid molecule comprising at least ~~12 sequential~~ 30 contiguous nucleotides ~~from~~of nucleotides 1 to 1038 of SEQ ID NO:1.
3. (Currently Amended) An isolated nucleic acid molecule having at least a ~~70%~~ 95% sequence identity to ~~SEQ ID NO:1 from nucleotide~~ nucleotides 1 to 1038 of SEQ ID NO:1.
4. (Original) An isolated nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:1.
5. (Original) An isolated nucleic acid molecule encoding a polypeptide comprising the amino acid sequence of SEQ ID NO:2.
6. (Original) An expression vector comprising the nucleic acid molecule of claim 5.
7. (Original) A recombinant host cell containing the vector of claim 6.
8. (Withdrawn) A substantially purified polypeptide having S2 serine protease activity, comprising an amino acid sequence having at least a 90% identity to amino acid 1 to 9 of SEQ ID NO:2.
9. (Withdrawn) The polypeptide of claim 8 comprising an amino acid sequence of SEQ ID NO:2.
10. (Withdrawn) A substantially purified polypeptide having S2 serine protease activity and comprising the amino acid sequence corresponding to amino acids 1 to 9 of

SEQ ID NO:2 or an amino acid sequence wherein one of amino acids 1 to 9 is substituted with a conserved amino acid substitution.

11. (Withdrawn) An antibody that selectively binds to a polypeptide having S2 serine protease activity and comprising an amino acid sequence having at least a 90% identity to amino acids 1 to 9 of SEQ ID NO:2.
12. (Withdrawn) An antibody that selectively binds to a polypeptide having S2 serine protease activity and comprising the amino acid sequence corresponding to amino acids 1 to 9 of SEQ ID NO:2 or an amino acid sequence wherein one of amino acids 1 to 9 is substituted with a conserved amino acid substitution.
13. (Withdrawn) A method of identifying a compound that increases or decreases the biological activity of a protein, comprising the steps of:
  - (a) contacting a test compound with a protein comprising an amino acid sequence having at least a 90% identity to amino acid 1 to 9 of SEQ ID NO:2; and
  - (b) determining whether the test compound increases or decreases the biological activity of the protein.
14. (Withdrawn) A method of identifying a compound that increases or decreases the protease activity of a protein, comprising the steps of:
  - (a) contacting a test compound with a sample comprising an S2 protease, the protease comprising an amino acid sequence having at least a 90% identity to amino acid 1 to 9 of SEQ ID NO:2 and with a substrate that is cleavable by the protein; and
  - (b) determining whether the test compound increases or decreases the cleavage of said substrate by the protein.
15. (Withdrawn) The method of claim 14 wherein said sample comprises a substantially purified protein.
16. (Withdrawn) The method of claim 14 wherein said sample comprises a cell lysate.
17. (Withdrawn) The method of claim 14 wherein said sample comprises a cell.

18. (Withdrawn) A method of identifying a compound that binds to a protein, comprising the steps of:
- (a) incubating a test compound with a sample comprising a protein, the protein comprising an amino acid sequence having at least a 90% identity to amino acid 1 to 9 of SEQ ID NO:2 and a labeled ligand for the protein;
  - (b) separating the protein from unbound labeled ligand; and
  - (c) identifying a compound that inhibits ligand binding to the subunit by a reduction in the amount of labeled ligand binding to the protein.

The following claims are renumbered:

19. (Withdrawn) The method of claim 17 wherein the sample comprises a substantially purified protein.
20. (Withdrawn) The method of claim 17 wherein the sample comprises a cell lysate.
21. (Withdrawn) The method of claim 17 wherein the sample comprises a cell.